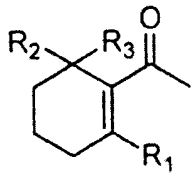
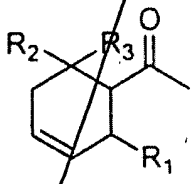
wherein, R_1, R_2 and R_3 each independently represents a hydrogen atom or a methyl group and at least two of R_1, R_2 and R_3 represent a methyl group, or a 1-cyclohexenyl methyl ketone represented by the following formula (1c):



. . . (1c)

wherein R_1, R_2 and R_3 have the same meanings as defined above, or a mixture of the cyclohexenyl methyl ketones of the formulas (1b) and (1c), which comprises

isomerizing, in the presence of a catalyst, a 3-cyclohexenyl methyl ketone represented by the following formula (1a):

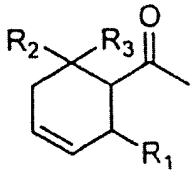


. . . (1a)

wherein, R_1, R_2 and R_3 have the same meanings as defined above, and

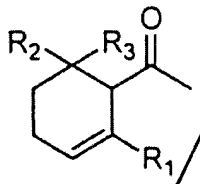
optionally distilling the mixture.

4. (Amended) A process of isomerizing, in the presence of a catalyst, a 3-cyclohexenyl methyl ketone represented by the following formula (1a):



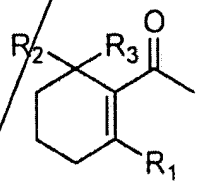
. . . (1a)

wherein R_1, R_2 and R_3 each independently represents a hydrogen atom or a methyl group and at least two of R_1, R_2 and R_3 represent a methyl group, into a 2-cyclohexenyl methyl ketone represented by the following formula (1b):



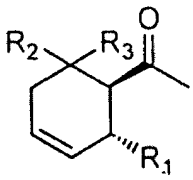
. . . (1b)

wherein R_1, R_2 and R_3 have the same meanings as defined above, or a 1-cyclohexenyl methyl ketone represented by the following formula (1c):



. . . (1c)

wherein R_1, R_2 and R_3 have the same meanings as defined above, or a mixture of the cyclohexenyl methyl ketones of the formulas (1b) and (1c) and (1a'), wherein the cyclohexenyl methyl ketone of formula (1a') is the following, a trans 3-cyclohexenyl methyl ketone of formula (1a'):



. . . (1a')